

## REMARKS

Claims 8-10 and 19 are pending in the present application. Claims 11-19 are withdrawn. Under MPEP 706.07(h), Applicants are submitting an information disclosure statement and a Declaration in support of patentability of the claims. The undersigned attorney respectfully request Examiner Interview in advance of issuing the next office action.

### *Rejections under 35 U.S.C. § 103*

The Examiner rejected claims 8-10 and 19 under 35 U.S.C. §103(a) as being obvious over the combined teachings of Bartlett et al. (Pest Management Science, 2002, 58, 649-662.), Gullino et al. (Crop Protection, 2000, 19, 1-11), Müller et al. (WO 97/40688), Rademacher et al. (US 5,869,424), Elad (The Netherlands Journal of Plant Pathology, 1993, 99, 105-113), and Grover et al (Plant Physiology, 1976, 57, 886-889). Applicants respectfully traverse the rejection.

The office action asserts that Gullino teaches that “[i]n addition to the strobilurin's direct effect on pathogens, these fungicides induce physiological alterations in many crops, particularly cereals.” Office Action, page 4. The office action further alleges that Müller teaches “combinations of pyraclostrobin with kresoxim-methyl or epoxiconazole.” *Id.* After acknowledging that neither Bartlett nor Gullino teaches combining pyraclostrobin with prohexadione-Ca or  $\text{Co}^{++}$ , the office action asserts that “they both teach that the unexpected superior physiological activity is due to the inhibition of ethylene biosynthesis” and concludes that “it would have been *prima facie* obvious to add inhibitors of ethylene biosynthesis.” *Id.* The office action further asserts that Elad and Grover teach that  $\text{Co}^{++}$  ions are ethylene biosynthesis inhibitors and that Rademacher teaches compositions comprising the combination of ethylene biosynthesis inhibitors and plant growth retardants, such as  $\gamma$ prohexadione-Ca. Office Action, page 5. The office then concludes that it would have been *prima facie* obvious for the skilled artisan to combine strobilurins of Bartlett with inhibitors of biosynthesis such as  $\text{Co}^{++}$  as well as combine prohexadione-Ca and an azole. In response to Applicants' arguments, the office action asserts that Muller teaches combining two ethylene biosynthesis inhibitors, pyraclostrobin with kerosin-methyl and concludes that it is would have been *prima facie* obvious to combine pyraclostrobin with another known ethylene biosynthesis inhibitor. Applicants disagree.

Claim 19 is directed to a composition comprising pyraclostrobin and prohexadione-Ca in a weight ratio of 20:1 to 0.5:1. Absent hindsight reconstruction in combining six prior art

references, one of ordinary skill in the art would not have been motivated to arrive at the claimed composition of pyraclostrobin and prohexadione-Ca at the claimed weight ratios.

Even if the office action made the *prima facie* case, the combination of pyraclostrobin and prohexadione-Ca provides an unexpectedly superior reduction of ethylene production. The attached declaration by Dr. Lutz Brahm (attached as Exhibit A) provides data (replicated ten times) for the effect of ethylene biosynthesis of fresh shoots harvested seven days after treatment with pyraclostrobin, prohexadione-Ca, or combinations thereof. Before starting the ethylene production tests, the shoots were first stressed by placing them in a dry cabinet for 25-30 minutes at 30-35°C. For pyraclostrobin alone, application of 25 g/ha leads to ethylene synthesis reduction efficacy of -1.7% (i.e., an increase of ethylene production of 1.7%) after 22 hours and -19.7% (i.e., an increase of ethylene production of about 20%) after 44 hours. Similarly, prohexadione-Ca (applied also at 25 g/ha) reduces ethylene production by a mere 3.2% after 22 hrs but increases ethylene production by 1% after 44 hours. A person skilled in the art would expect the combination of the two active compounds in a treatment to increase the production of ethylene by 17.3% after 22 hours and by 33.5% after 44 hours (see the Declaration). In contrast, and completely unexpectedly, the combination of the two active compounds in a treatment decreased ethylene production by almost 13% after 22 hours and by almost 29% after 44 hours. Thus, the combination of pyraclostrobin and prohexadione-Ca has unexpectedly superior properties than the skilled artisan would have expected from the combination. As such, the claims of the present application, which recite a combination of pyraclostrobin and prohexadione-Ca, are unobvious over the prior art. Applicants respectfully request withdrawal of the rejection.

#### ***Right to Rejoinder***

Upon finding product claim 19 allowable, withdrawn claims 11-18 should be rejoined for substantive prosecution because they are directed to a process and depend from or otherwise contain all the limitations of the allowable product claim 8. Under MPEP 821.04(b), "if applicant elects a claim(s) directed to a product which is subsequently found allowable, withdrawn process claims which depend from or otherwise require all the limitations of an allowable product claim will be considered for rejoinder."

For the foregoing reasons, claims 8-19 are considered allowable. A Notice to this effect is respectfully requested. If any questions remain, the Examiner is invited to contact the undersigned at the number given below.

**The Director is hereby authorized to charge any appropriate fees that may be required by this paper, and to credit any overpayment, to Deposit Account No. 23-1925.**

Respectfully submitted,

BRINKS HOFER GILSON & LIONE

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